R3G146-AH23-10

EC centrifugal fan

forward curved, single inlet

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Nominal data

Type	**R3G146-AH23-10**
Motor	**M3G055-CF**

Phase		1~
Nominal voltage	VAC	230
Nominal voltage range	VAC	200 .. 240
Frequency	Hz	50/60
Type of data definition		ml
Speed (rpm)	min^{-1}	1830
Power input	W	81
Current draw	A	0.7
Min. back pressure	Pa	0
Min. ambient temperature	°C	-25
Max. ambient temperature	°C	60

ml = Max. load · me = Max. efficiency · fa = Running at free air · cs = Customer specs · cu = Customer unit
Subject to alterations

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Technical features

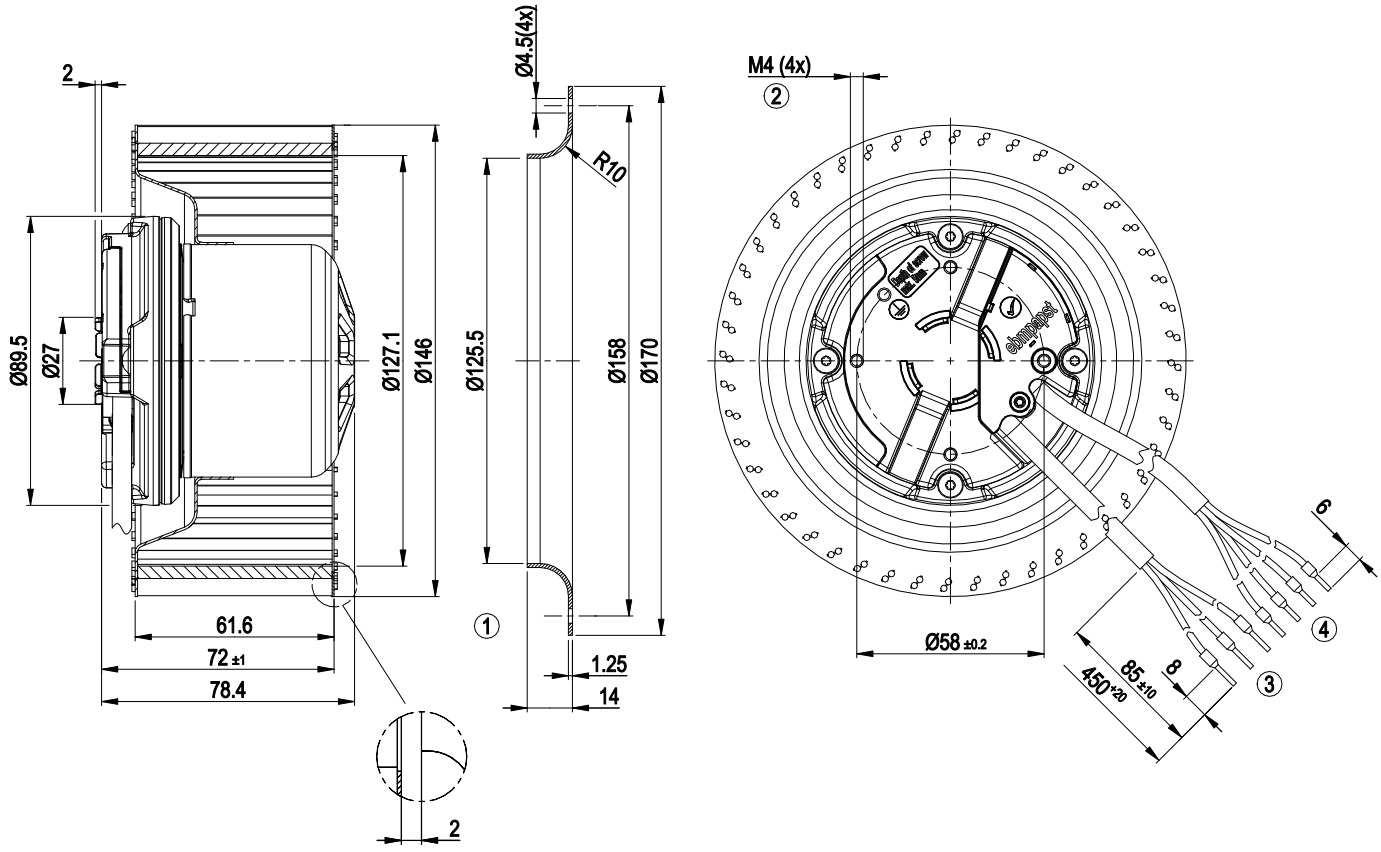
Mass	1.3 kg
Size	146 mm
Surface of rotor	Thick layer passivated
Material of impeller	Sheet steel, galvanised
Direction of rotation	Counter-clockwise, seen on rotor
Type of protection	IP 54
Insulation class	"B"
Humidity (F)/environmental protection class (H)	H1
Max. permissible ambient motor temp. (transp./ storage)	+ 80 °C
Min. permissible ambient motor temp. (transp./storage)	- 40 °C
Mounting position	Any
Condensate discharge holes	None, open rotor
Operation mode	S1
Motor bearing	Ball bearing
Technical features	- Output 10 VDC, max. 1.1 mA - Tach output - Output limit - Motor current limit - Soft start - Control input 0-10 VDC / PWM - Control interface with SELV potential safely disconnected from the mains - Overvoltage detection - Over-temperature protected electronics / motor - Line undervoltage detection
EMC interference immunity	Acc. to EN 61000-6-2 (industrial environment)
EMC harmonics	Acc. to EN 61000-3-2/3
EMC interference emission	Acc. to EN 61000-6-3 (household environment)
Touch current acc. IEC 60990 (measuring network Fig. 4, TN system)	<= 3.5 mA
Motor protection	Locked-rotor protection
Cable exit	Variable
Protection class	I (if protective earth is connected by customer)
Product conforming to standard	EN 60335-1; CE
Approval	C22.2 Nr.77 + CAN/CSA-E60730-1; UL 1004-7 + 60730

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Product drawing



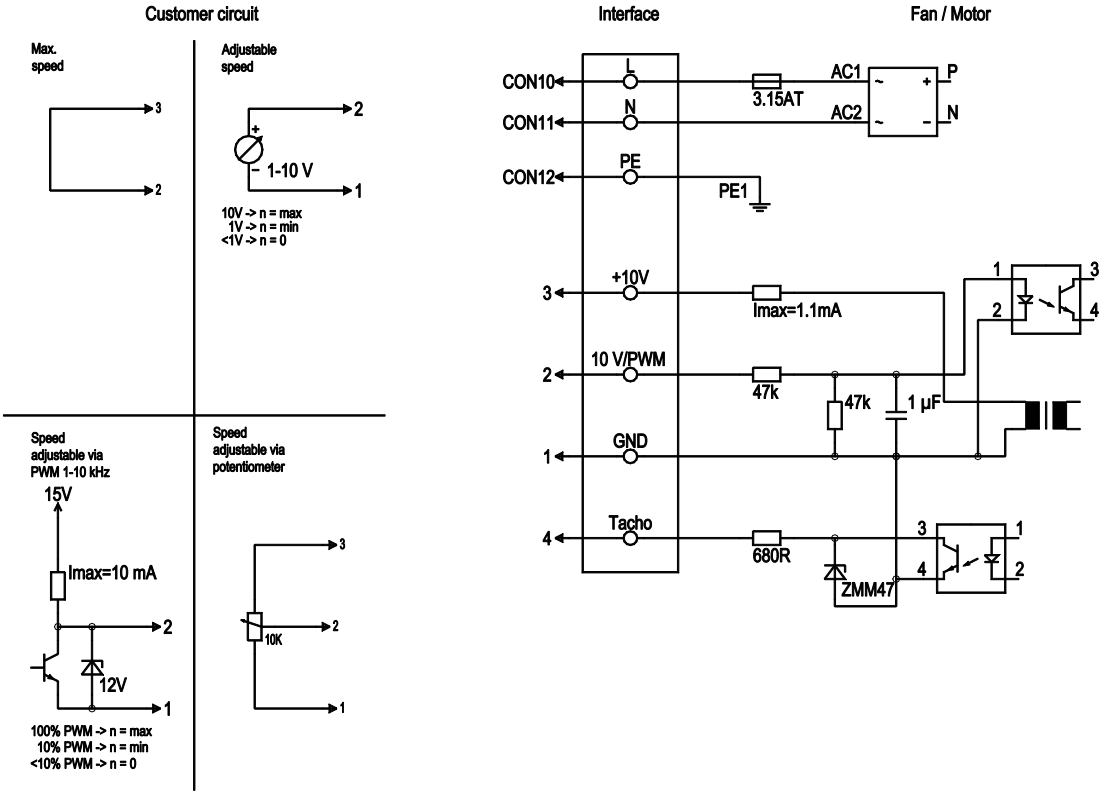
1	Accessory part: Inlet nozzle 09576-2-4013, not included in scope of delivery
2	Thread reach max. 5 mm
3	Connection line PVC AWG20, 3x crimped core-end sleeves
4	Connection line PVC AWG22, 4x crimped core-end sleeves

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Connection screen



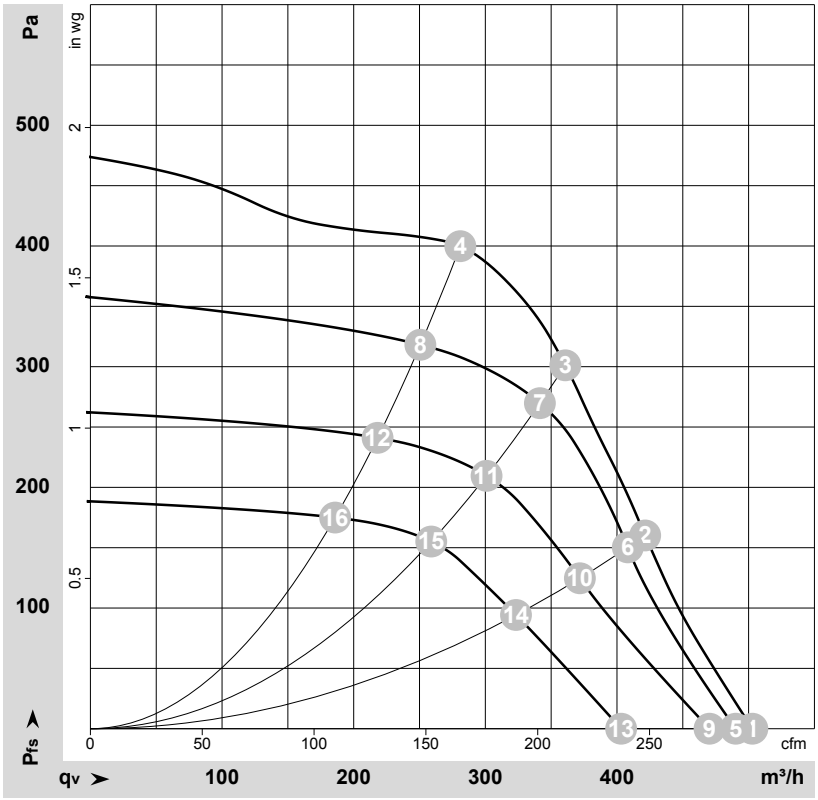
No.	Conn.	Designation	Colour	Function / assignment
	CON10	L	black	Power supply 230 VAC, 50-60 Hz, see type plate for voltage range
	CON11	N	blue	Neutral conductor
	CON12	PE	green/yellow	Protective earth
	1	GND	blue	GND connection for control interface
	2	0-10V PWM	yellow	Control input 0-10 V or PWM, electrically isolated
	3	10 V / max. 1,1 mA	red	Voltage output 10 VDC 1.1 mA, electrically isolated, short-circuit-proof
	4	Tacho	white	Tach output: Open collector, 1 pulse per revolution, electrically isolated

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Charts: Air flow 50 Hz



ρ = 1.15 kg/m³ ± 2 %

Measurement: LU-132024-1
Measurement: LU-132761-1
Measurement: LU-132762-1
Measurement: LU-132763-1

Air performance measured as per ISO 5801 Installation category A. For detailed information on the measuring set-up, please contact ebm-papst. Suction-side noise levels: LwA measured as per ISO 13347 / LpA measured with 1m distance to fan axis. The values given are valid under the measuring conditions mentioned above and may vary according to the actual installation situation. With any deviation from the standard set-up, the specific values have to be checked and reviewed with the unit installed.

Measured values

	U	f	n	P_{ed}	I	LpA_{in}	LwA_{in}	q_V	p_{fs}	q_V	p_{fs}
	V	Hz	min^{-1}	W	A	dB(A)	dB(A)	m^3/h	Pa	cfm	inH2O
1	230	50	1830	81	0.70	65	74	505	0	295	0.00
2	230	50	2090	81	0.70	63	70	420	160	250	0.64
3	230	50	2325	81	0.70	62	69	360	300	210	1.20
4	230	50	2575	81	0.67	62	70	280	400	165	1.61
5	230	50	1800	80	0.68	64	74	490	0	290	0.00
6	230	50	2020	78	0.67	63	70	410	150	240	0.60
7	230	50	2200	73	0.62	61	69	340	281	200	1.13
8	230	50	2300	61	0.54	61	68	250	321	150	1.29
9	230	50	1735	71	0.61	63	72	470	0	275	0.00
10	230	50	1845	59	0.53	60	68	370	125	220	0.50
11	230	50	1935	49	0.45	58	66	300	217	175	0.87
12	230	50	2015	40	0.39	57	65	220	243	130	0.98
13	230	50	1505	44	0.41	60	67	405	0	235	0.00
14	230	50	1595	38	0.37	57	64	325	94	190	0.38
15	230	50	1670	32	0.32	54	62	260	161	150	0.65
16	230	50	1725	26	0.27	53	62	185	176	110	0.71

U = Supply voltage · f = Frequency · n = Speed (rpm) · P_{ed} = Power input · I = Current draw · LpA_{in} = Sound pressure level inlet side · LwA_{in} = Sound power level inlet side · q_V = Air flow
p_{fs} = Pressure increase

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